

Attorney Docket No. P15375-US1

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims

1-38. (Cancelled)

39. (New) A cross-connect apparatus, comprising:

at least one switch matrix, said switch matrix including switching rows, switching columns, and relays, each relay including at least a first pole connected to one of the switching columns and at least a second pole connected to one of the switching rows;

wherein at least some of the relays are fuse-relays, which fuse-relays include said first pole and at least said second pole, wherein the fuse-relays comprise a resilient device that is held in an elastically deformed position by a fuse when the fuse is whole, and wherein the resilient device is arranged to shift a connection between the first pole and the second pole between a closed and an open position when the fuse is blown.

40. (New) The cross-connect apparatus according to claim 39, wherein the fuse-relay further includes a third pole and a fourth pole, wherein the fuse is arranged to be blown when a sufficiently high current is sent between the third pole and the fourth pole.

41. (New) The cross-connect apparatus according to claim 40, wherein the fuse-relay further includes a first metal blade connected to the first pole and a second metal blade connected to the second pole; wherein the resilient device includes a blade

Attorney Docket No. P15375-US1

spring arranged to be bent when the fuse is whole, and wherein the blade spring is arranged to be released and, by pressing the second metal blade, to shift its contact with the first metal blade between the first pole and the second pole between a closed and an open position when the fuse is blown.

42. (New) The cross-connect apparatus according to claim 40, wherein the resilient device includes a coil spring with a switch contact, wherein the coil spring is arranged to be in a tensioned position when the fuse is whole, and wherein the coil spring is arranged to be released and, by pressing the switch contact, to shift its connection with the first pole and the second pole to shift contact between the first pole and the second pole between a closed and an open position when the fuse is blown.

43. (New) The cross-connect apparatus according to claim 40, wherein the resilient device includes a torsion spring and a switch contact, wherein the torsion spring is arranged to be twisted when the fuse is whole and in that the torsion spring is arranged to be released and, by pressing the switch contact, to shift its connection with the first pole and the second pole to shift contact between the first pole and the second pole between a closed and an open position when the fuse is blown.

44. (New) The cross-connect apparatus according to claim 39, wherein the cross-connect further includes addressing rows and addressing columns, and wherein said relays comprise a third pole connected to one of the addressing rows and a fourth pole connected to one of the addressing columns.

Preliminary Amendment – Page 3 of 9
EUS/J/P:04-8857

Attorney Docket No. P15375-US1

45. (New) The cross-connect apparatus according to claim 44, wherein the cross-connect further includes a row multiplexor connected to the addressing rows and a column multiplexor connected to the addressing columns.

46. (New) The cross-connect apparatus according to claim 39, wherein the cross-connect further includes additional switching rows, wherein at least some of the relays are fuse-relays and in that said relays further each include a fifth pole connected to one of the additional switching rows.

47. (New) The cross-connect apparatus according to claim 39, wherein all of the switching rows are not connected to all of the switching columns via relays.

48. (New) The cross-connect apparatus according to claim 39, wherein an algorithm is provided for the selection of one of a group of second items connected to the cross-connect for a selected first item from a group of first items connected to the cross-connect.

49. (New) The cross-connect apparatus according to claim 48, wherein said algorithm is arranged to select the second item where the rest of the first items able to connect to said second item, either already are connected to another second item, or have the highest possibility to be connected to another second item.

Attorney Docket No. P15375-US1

50. (New) The cross-connect apparatus according to claim 48, wherein the first items are subscriber's terminals and the second items are xDSL modems.

51. (New) The cross-connect apparatus according to claim 48, wherein the cross-connect includes a back connected with at least one "page" including the relays.

52. (New) A method for connecting one of several first items to one of several second items, wherein the first items and the second items are connected to a cross-connect including switching columns, switching rows, addressing columns, addressing rows and fuse-relays; said method comprising the steps of:

selecting a second item to which a selected first item is to be connected;

addressing an addressing column and an addressing row in the cross-connect; and

transmitting a high current through said addressing row and addressing column sufficient to blow a fuse in one of the fuse-relays whereby a connection is caused to be made or broken between a switching row and a switching column, thereby connecting the selected first item with the selected second item.

53. (New) The method according to claim 52, wherein the cross-connect further includes additional switching rows, and a connection is caused to be made or broken between a switching row and an additional switching row when the fuse is blown.

54. (New) The method according to claim 52, further comprising the step of selecting the second item where the rest of the first items able to connect to said second

Attorney Docket No. P15375-US1

item either already are connected to another second item or have the highest possibility to be connected to another second item.

55. (New) The method according to claim 52, wherein the first items are terminals and the second items are xDSL modems.

56. (New) The method according to claim 52, wherein the resilient device includes a torsion spring and a switch contact; wherein the torsion spring is arranged to be twisted when the fuse is whole; and in that the torsion spring is arranged to be released and to press the switch contact towards the first pole and the second pole to make contact between the first pole and the second pole and to press the switch contact from the fifth pole and the second pole to break contact between the fifth pole and the second pole when the fuse is blown.

57. (New) The method according to claim 39, wherein the third pole and the fourth pole are isolated from the other poles.

58. (New) The method according to claim 39, wherein the fuse relay includes an indicator indicating if the fuse is whole or blown.

59. (New) The method according to claim 39, wherein the fuse-relay includes a test button arranged to test connections without blowing the fuse.

Attorney Docket No. P15375-US1

60. (New) A cross-connect apparatus including at least one switch matrix, said switch matrix including switching rows, switching columns, said cross-connect apparatus comprising:

relays, each relay including a first pole connected to one of the switching columns and a second pole connected to one of the switching rows, wherein at least some of the relays are fuse-relays.

61. (New) The cross-connect apparatus according to claim 60, wherein the cross-connect further includes addressing rows and addressing columns, wherein said relays further each include a third pole connected to one of the addressing rows and a fourth pole connected to one of the addressing columns.

62. (New) The cross-connect apparatus according to claim 61, wherein the cross-connect further includes a row multiplexor connected to the addressing rows and a column multiplexor connected to the addressing columns.

63. (New) The cross-connect apparatus according to claim 60, wherein the cross-connect further includes additional switching rows wherein at least some of the relays are fuse-relays and in that said relays further each include a fifth pole connected to one of the additional switching rows.

64. (New) The cross-connect apparatus according to claim 60, wherein all of the switching rows are not connected to all of the switching columns via relays.

Attorney Docket No. P15375-US1

65. (New) The cross-connect apparatus according to claim 60, wherein an algorithm is provided for the selection of one of a group of second items connected to the cross-connect for a selected first item from a group of first items connected to the cross-connect.

66. (New) The cross-connect apparatus according to claim 65, wherein said algorithm is arranged to select the second item where the rest of the first items able to connect to said second item, either already are connected to another second item, or have the highest possibility to be connected to another second item.

67. (New) The cross-connect apparatus according to claim 65, wherein the first items are subscriber's terminals and the second items are xDSL modems.

68. (New) The cross-connect apparatus according to claim 65, wherein the cross-connect includes a back connected with at least one "page" including the relays.

* * *